

## REMARKS

This Amendment is responsive to the Office Action identified above, and is responsive in any manner indicated below.

## PENDING CLAIMS

Claims 1-19 were pending in the application at the time of the Office Action, under consideration and subject to examination. Appropriate claims have been amended, canceled and/or added (without prejudice or disclaimer) in order to adjust a clarity and/or focus of Applicant's claimed invention. That is, such changes are unrelated to any prior art or scope adjustment and are simply refocused claims in which Applicant is present interested. At entry of this paper, Claims 1 and 3-20 remain pending for further consideration and examination in the application.

## 35 USC §112, 1<sup>ST</sup> ¶ REJECTION - OBVIATED BY CLAIM AMENDMENTS

Claim 1 was rejected under 35 USC §112, 1<sup>ST</sup> ¶, for the concerns listed within Section 2 on page 2 of the Office Action. Traversal is appropriate, but such objection/rejection has been obviated by the present clarifying amendments to Applicant's claims. In order to preclude renewal of any such rejection, Applicant respectfully submits the following comments to show that Applicant's invention was sufficiently described and taught within Applicant's original disclosure.

More particularly, clarified Claim 1 sets forth a focus  $j^{\text{th}}$  layer ( $2 \leq j \leq n$ ,  $j \neq i$ ) and a focus  $i^{\text{th}}$  layer ( $1 \leq i \leq n-1$ ). Accordingly, the layers have been more specifically identified as "focus" layers, with limitations defining that the focus  $j^{\text{th}}$  layer and focus  $i^{\text{th}}$  layer are at different depths of the substrate. Further, because of mathematical

limitations contained within the claim, the focus  $j^{\text{th}}$  layer and focus  $i^{\text{th}}$  layer can not be the same layer. Specifically, the clarified claim now recites more specific features of the focus  $i^{\text{th}}$  layer. In a practical embodiment, the focus i-layer and focus j-layer may be laminated films interposed between a substrate and spacer layer, or a laminated film interposed between a spacer layer and another spacer layer, wherein the i-layer and j-layer are composed of a lower protective layer, a recording layer, an upper protective layer, a nonlinear optical layer or a reflective layer (see Figs. 1 and 5, and also page 7, lines 12-17 of the original specification).

Based upon the foregoing improved clarity, reconsideration and withdrawal of the §112, 1<sup>ST</sup> ¶ rejection of Claim 1 are respectfully requested.

#### **NON-REWRITTEN ALLOWABLE CLAIMS**

Although Claims 8-10 were indicated as being allowable if rewritten at Item 8 on page 6 of the Office Action, rewriting has not yet been effected as it is believed that any base and intervening claims may be held allowable responsive to this paper. Applicant respectfully reserves the right to rewrite the potentially allowable claims at a later time if necessary, and Applicant and the undersigned respectfully thank the Examiner for such indication of potentially allowable subject matter.

#### **ALL REJECTIONS UNDER 35 USC §§102 AND 103 - TRAVERSED**

All 35 USC rejections are respectfully traversed. Such rejections have been rendered obsolete by the present clarifying amendments to Applicant's claims, and accordingly, traversal arguments are not appropriate at this time. However,

Applicant respectfully submits the following to preclude renewal of any such rejections against Applicant's clarified claims.

All descriptions of Applicant's disclosed and claimed invention, and all descriptions and rebuttal arguments regarding the applied prior art, as previously submitted by Applicant in any form, are repeated and incorporated herein by reference. Further, all Office Action statements regarding the prior art rejections are respectfully traversed. As additional arguments, Applicant respectfully submits the following.

In order to properly support a §102 anticipatory-type rejection, any applied art reference must disclose each and every limitation of any rejected claim. Further, in order to properly support a §103 obviousness-type rejection, any applied art must not only teach the claimed invention, but contain the motivation for modifying the art to arrive at the claimed invention. The applied art does not adequately support either a §102 anticipatory-type rejection or a §103 obviousness-type rejection because, at minimum, such applied art does not disclose (or suggest) important limitations of Applicant's clarified claims as discussed in the following remarks submitted from Applicant's foreign representative in support of traversal of the rejections and the patentability of Applicant's claims.

One of the important features of the present invention (see independent Claim 20) is that WHENEVER light IS NOT focused substantially on Applicant's selectably-transmissive layer (*i.e.*, the  $i^{\text{th}}$  layer), the selectably-transmissive layer is substantially transmissive to allow the light to substantially pass therethrough to allow access to a recording layer other than the recording layer associated with the selectably-transmissive layer, and WHENEVER light IS focused substantially on the

selectably-transmissive layer, the transmittance of the selectably-transmissive layer changes so that the selectably-transmissive layer becomes more reflective to allow access to the associated recording layer. Thus, in essence, Applicant's selectably-transmissive layer may be acting as a light valve, wherein, if light IS NOT focused on it, it allows light to substantially pass therethrough to access a recording layer on a different substrate level, and wherein if light IS focused on it, it selectably changes to temporarily become more reflective, to allow access to a recording layer on that level. It may be important to note that Applicant's transmittance change is very temporary, *i.e.*, occupying time only when light is focused thereon.

In terms other claim language, independent Claim 18, for example, recites "wherein a nonlinear film is provided between the substrate and the second recording film, the nonlinear film having reflectance higher than transmittance whenever light focuses thereon, while having transmittance higher than reflectance whenever the light does not focus thereon."

Independent Claim 1 (and numerous claims dependent therefrom) recites substantially more detailed features/limitations (including a specific mathematical expression) having the gist of the above-discussed features.

Turning now to rebuttal of the applied art, Nishiuchi *et al.* (the primary reference) does not disclose or suggest a focusing-responsive selectably-transmissive layer which passes light whenever light is not focused thereon, but which can be temporally rendered reflective whenever light is focused thereon. More particularly, Nishiuchi *et al.* appears concerned with a differing type recording medium having two separate layers having different reflectivities, and which uses more permanent phase change materials to record data.

Abe (the secondary reference is directed to a wholly differing objective from Applicant. That is, Abe's objective (see, e.g., Column 1, lines 62-66 and Column 2, lines 33-34) is to achieve a recorded spot diameter which is of a substantially higher resolution than a spot diameter of a laser beam applied to record the spot. In Abe's FIG. 3 embodiment (see, e.g., Column 6, lines 39 *et seq.*), Abe's auxiliary layer effectively becomes transmissive only at locations having the highest intensity of light impinged thereon, while remaining non-transmissive in other areas, so as to realize a smaller recorded spot than could be realized by the laser spot alone. Abe's FIG. 4 embodiment (see, e.g., Column 6, lines 64 *et seq.*) has an auxiliary layer which effectively becomes reflective only at locations having the highest intensity of light impinged thereon, while remaining non-reflective in other areas, so as to realize a smaller recorded spot.

Nowhere does Abe disclose or suggest that selective transmittance can be used to allow light to travel onward to focus on and access a recording layer on a differing level of the substrate. In fact, Abe appears to disclose only single recording layer embodiments. Accordingly, even if Nishiuchi *et al.* and Abe *et al.* were combined, it is respectfully submitted that such references, AT BEST, would suggest usage of Abe's special auxiliary layer arrangements ONLY TO ACHIEVE SMALLER RECORDED SPOTS. Abe would NOT suggest allowing light to travel onward to focus on and access a recording layer on a differing level of the substrate, because it appears that Abe's light is ALWAYS BLOCKED from further progression. More particularly, in Abe's FIG. 3 embodiment, the recording layer 12 and/or the substrate 11 would block/absorb light. Similarly, in Abe's FIG. 4 embodiment, the auxiliary layer 16 and/or substrate 11 would block/absorb light. It is respectfully submitted

that the actual teachings of the references cannot properly support the rejection without improper hindsight suggestion gleaned from Applicant's disclosure.

Sawada *et al.* does not cure any deficiency discussed above with respect to the primary and secondary references, *i.e.*, Sawada *et al.* appears to have been applied merely as to its teachings of materials.

As a result of all of the foregoing, it is respectfully submitted that the applied art would not adequately support any rejection of Applicant's present claims.

In addition to the foregoing, the following additional remarks from Applicant's foreign representative are also submitted in support of traversal of the rejection and patentability of Applicant's claims.

One important feature of Applicant's invention is the fact that, when light is focused on the recording film on a  $j^{\text{th}}$  layer, transmittance  $T_i$  of an  $i^{\text{th}}$  layer satisfies the expression

$$\prod_{i=1}^{j-1} T_i^2 \geq \frac{n-j+1}{n},$$

and the transmittance of the  $i^{\text{th}}$  layer changes when the light focuses on the recording film of the  $i^{\text{th}}$  layer. It achieves that the signal quality of the layer of the light-incident side is increased and the higher or large signal of the further layer is obtained because of the high transmittance of the layer on the light incident side (see, *e.g.*, page 3, lines 6-19 of the present application).

Nishiuchi *et al.* discloses a recording medium having at least two information layers (see, *e.g.*, Abstract). However the structure in Nishiuchi *et al.* is NOT identical, or even particularly relevant, to Applicant's claims. Nishiuchi *et al.* uses a

phase-change material, a magneto-optic material, an organic material and a photochromic material as recording films (see, e.g., Column 14, lines 37 *et seq.*). This material does NOT change the transmittance of the  $i$ th layer when the light focuses on the recording film of the  $i$ th layer. On the other hand, in Applicant's invention, the transmittance of the  $i$ th layer changes when the light focuses on the recording film of the  $i$ th layer. Moreover, Nishiuchi *et al.* does not disclose or suggest the relationship of the transmittance value and the  $n$ th recording layer.

Abe discloses an auxiliary layer whose transmittance changes with the energy of an incident light (see, e.g., Abstract and Column 7, lines 58 *et seq.*). In Abe, by using the auxiliary layer, an optical mark can be formed smaller than the spot diameter of the laser beam (see, e.g., Column 8, lines 35 *et seq.*). However, Abe shows only a single layer, so Abe does not disclose the relationship of the transmittance value and  $n$ th recording layer. Moreover, the purpose of Abe is forming a small spot diameter, so the purpose is completely different from Applicant's invention.

Sawada *et al.* discloses a magneto-optical recording medium having a magnetic oxide layer (see, e.g., Abstract). However, Sawada *et al.* shows only a single layer, so Sawada does not disclose the relationship of the transmittance value and  $n$ th recording layer. Moreover, in Sawada *et al.*, the transmittance does NOT change when the light focuses on the recording film.

To summarize, none of the cited references mention the relation of the transmittance value and  $n$ th recording layer, as disclosed and taught by Applicant's Claim 1, and the transmittance of the layers is a unique issue in order to obtain both a good signal quality of the layer of the light-incident side and large signal of the

further layer. Therefore, single layer embodiments such as those found in Abe and Sawada *et al.* actually teach away from Applicant's invention.

As a result of all of the foregoing, it is respectfully submitted that the applied art would not support a §102 anticipatory-type rejection or §103 obviousness-type rejection of Applicant's claims. Accordingly, reconsideration and withdrawal of such §§102 and 103 rejections, and express written allowance of all of the rejected claims, are respectfully requested. Further, it is respectfully submitted as a reminder that, if new art is now cited against any of Applicant's claims, then it would not be proper to make a next Action final.

### **RESERVATION OF RIGHTS**

It is respectfully submitted that any and all claim amendments and/or cancellations submitted within this paper and throughout prosecution of the present application are without prejudice or disclaimer of any scope or subject matter. Further, Applicant respectfully reserves all rights to file subsequent related application(s) (including reissue applications) directed to any/all previously claimed limitations/features which have been subsequently amended or cancelled, or to any/all limitations/features not yet claimed, *i.e.*, Applicant continues (indefinitely) to maintain no intention or desire to dedicate or surrender any limitations/features of subject matter of the present application to the public.




### EXAMINER INVITED TO TELEPHONE

The Examiner is invited to telephone the undersigned at the local DC area number 703-312-6600, to discuss an Examiner's Amendment or other suggested action for accelerating prosecution and moving the present application to allowance.

### CONCLUSION

This Amendment is being filed within the shortened statutory period for response set by the Office Action mailed 27 October 2003, and therefore, no Petition or extension fee is required. To whatever other extent is actually necessary and appropriate, Applicant respectfully petitions the Commissioner for an extension of time under 37 CFR §1.136. No additional fees are required for entry of this Amendment. Please charge any actual and proper deficiencies in fees to ATS&K Deposit Account No. 01-2135 (as Order No. 501.41179X00).

Respectfully submitted,

  
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